

What is claimed is:

1. A flexible light array comprising:

a flexible substrate, said flexible substrate having a plurality of conducting circuits therein; and

5 a plurality of light emitting diodes arranged into at least one longitudinally and transversely aligned LED array on at least one of two opposite sides of said flexible substrate and respectively electrically connected to the conducting circuits of said flexible substrate and controllable by a driving circuit to emit light.

10 2. The flexible light array as claimed in claim 1, wherein said light emitting diodes are arranged into one longitudinally and transversely aligned LED array on one side of said flexible substrate, forming with said flexible substrate a flexible LED display panel.

15 3. The flexible light array as claimed in claim 2, wherein said flexible LED display panel is used as a signal light for a transportation vehicle.

4. The flexible light array as claimed in claim 2, wherein said flexible LED display panel is used as a lighting signboard.

20 5. The flexible light array as claimed in claim 2, wherein said flexible LED display panel is used as an outdoor TV wall.

6. The flexible light array as claimed in claim 1, wherein said light emitting diodes are arranged into two longitudinally and

transversely aligned LED arrays symmetrically disposed on the two opposite sides of said flexible substrate, forming with said flexible substrate a double-sided LED display panel.

7. The flexible light array as claimed in claim 1, wherein
5 said light emitting diodes are arranged into two longitudinally and transversely aligned LED arrays disposed on the two opposite sides of said flexible substrate in a staggered manner, forming with said flexible substrate a double-sided LED display panel.

8. The flexible light array as claimed in claim 1, further
10 comprising a flexible light-transmitting packing tube having said light emitting diodes and said flexible substrate packed therein.

9. The flexible light array as claimed in claim 8, wherein said flexible light-transmitting packing tube is coated with a layer of color filter coating.

15 10. The flexible light array as claimed in claim 1, further comprising a flexible light-transmitting plastic packing layer molded on said flexible substrate over said light emitting diodes.

11. The flexible light array as claimed in claim 10, wherein said flexible light-transmitting plastic packing layer is coated with
20 a layer of color filter coating.

12. A flexible light array fabrication procedure, comprising the steps of:

(a) preparing at least one LED array, each having a

plurality of longitudinally and transversely aligned light emitting diodes;

(b) preparing a flexible substrate having a plurality of conducting circuits therein;

5 (c) electrically connecting the light emitting diodes of said at least one LED array to the conducting circuits of said flexible substrate;

(d) packing said flexible substrate and said at least one LED array with flexible light-transmitting packing means; and

10 (e) cutting said flexible substrate subject to the desired size.

13. The flexible light array fabrication procedure as claimed in claim 12, wherein said step (d) packs said flexible substrate and said at least one LED array with a flexible
15 light-transmitting plastic packing layer by molding.

14. The flexible light array fabrication procedure as claimed in claim 12, wherein said step (d) packs said flexible substrate and said at least one LED array with a flexible light-transmitting tube.

20 15. The flexible light array fabrication procedure as claimed in claim 12, wherein said step (e) singulates the device thus obtained into individual flexible light arrays by cutting subject to the desired size.

16. The flexible light array fabrication procedure as claimed in claim 12, further comprising step (f) after said step (e), said step (f) preparing a driving circuit and then electrically connecting said driving circuit to the conducting circuits of said
5 flexible substrate for enabling said driving circuit to turn said light emitting diodes on or off.